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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 15

Application Number: 09/583,694
Filing Date: May 31, 2000
Appellant(s): UCEDA-SOSA ET AL.

Kevin P. Radigan (Reg. No. 31,789)
For Appellant

EXAMINER'S ANSWER

EXAMINER'S ANSWER

1. This is in response to the appeal brief filed March 18, 2004.

Real Party in Interest

2. The appellants' statement identifying the real party in interest contained in the brief is correct.

Related Appeals and Interferences

3. The appellants' statement identifying the related appeals and interferences contained in the brief is correct.

Status of Claims

4. The appellants' statement of the status of the claims contained in the brief is correct.

Status of Amendments After Final

5. The appellants' statement of the status of amendments after final rejection contained in the brief is correct.

Summary of Invention

6. The appellants' summary of invention contained in the brief is correct.

Issues

7. The appellants' statement of the issues in the brief is correct.

Grouping of Claims

8. The appellants' statement in the brief that certain claims do not stand or fall together is not agreed with because the applicant states group I comprising claims 1-27, yet submit that claims of Group I do not fall or stand together (i.e., "dependent claims 7,

8, 10, 11, 23, 24, 26, and 27 each include additional features that provide a separate basis of patentability over the applied art")

Claims Appealed

9. The copy of the appealed claims contained in the Appendix to the brief is correct.

Prior Art of Record

10. Ben-Shachar et al. (US 6,209,018 B1), issued on March 27, 2001, but filed November 13, 1997.

White et al. (US 5,933,490 A), issued on August 3, 1999, but filed March 12, 1997.

Grounds of Rejection

11. The following ground(s) of rejection are applicable to the appealed claims:

12. In light of the arguments presented in the Appeal Brief, claims 7, 8, 11, 15, 16, 19, 23, 24, and 27 are now objected to. Claims 1-6, 9, 10, 12-14, 17, 18, 20-22, 25, and 26 rejected under 35 U.S.C. 103(a).

13. Claims 1-6, 9, 10, 12-14, 17, 18, 20-22, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-Shachar et al. (US 6209018 B1) in view of White et al. (US 5933490 A).

As per claims 1, 2, and 3, Ben-Shachar teaches a method, a system providing a means for, and a program storage device readable by a machine, tangibly embodying at least one program of instructions executable by the machine to perform a method of managing connections (see col.3, lines 2-4) between clients and servers (see Fig.1) of a distributed computing environment, said method, system, and program comprising: determining, by a client of said distributed computing environment (see col.2, lines 11-17 and col.3, lines 5-9), that a server coupled to said client (see Fig.1), via a communications protocol that lacks individualized timeouts for individual components of said distributed computing environment (see col.2, lines 50-58), is unavailable to process requests for said client (see col.31, lines 5-10), wherein said server is a member of a group of a plurality of replicated servers (see Fig.29; col.3, lines 33-40 & 45-48; col.6, lines 15-16; and col.9, lines 12-15); and connecting said client to another replicated server of said group (see col.21, lines 64-65 and col.23, lines 3-9) wherein servers of said group lack knowledge of application-level information of a communication session of said client (see col.2, lines 7-17 and col.8, lines 16-32).

Ben-Shachar does not explicitly teach that the directly connecting said client to another replicated server, is performed by said client. White teaches of a direct connection performed by said client (see col.5, lines 38-48). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of White within the system of Ben-Shachar by implementing the user to select another replicated server within the method, system and program of managing connections between clients and servers of a distributed computing environment because this allows for the user to have a choice as to which replicated server the user desire, or whether the user would like to proceed or cancel. In most instances, the action is automated and thus transparent to the user, but asking the user to select prior to an action being performed is not novel in terms of functionality.

As per claims 4, 12, and 20, Ben-Shachar further teaches wherein the determining, is performed by a client request broker (see col.1, lines 66-67; col.2, lines 11-17; and col.3, lines 50-58).

As per claims 5-6, 13-14, and 21-22, Ben-Shachar further teaches wherein the determining, comprises causing a plurality of ping messages to be sent to the server (see col.18, lines 39-43 & 50-54).

As per claims 9, 17, and 25, Ben-Shachar further teaches wherein the determining comprises determining that a predetermined number of the plurality of ping messages, have failed (see col.18, lines 50-60).

As per claims 10, 18, and 26, Ben-Shachar further teaches wherein the connecting comprises first determining that another replicated server is available (see

col.9, lines 12-15; col.28, lines 42-57; and col.30, lines 26-28). It is inherent that when clones are employed for fault tolerance (see col.30, lines 8-9) and improving throughput by workload balancing (see col.29, lines 9-10) as in the system of Ben-Shachar, a determination is made of another replicated server that may service the request as long as that server is registered (see col.30, line 28).

14. Claims 7, 8, 11, 15, 16, 19, 23, 24, and 27 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior art of records Ben-Shachar et al. (US 6209018 B1) and White et al. (US 5933490 A), do not disclose, teach, or suggest the claim limitation of wherein the causing comprises causing a plurality of ping messages to be sent to the server in accordance with a dynamic ping interval, as claimed in claims 7, 15, and 23.

Prior art of records Ben-Shachar et al. (US 6209018 B1) and White et al. (US 5933490 A), do not disclose, teach, or suggest all the claim limitation of claims 8, 16, and 24 which depends on claims 7, 15, and 23.

Prior art of records Ben-Shachar et al. (US 6209018 B1) and White et al. (US 5933490 A), do not disclose, teach, or suggest the claim limitation of routing non-idempotent client requests from another replicated server to the server if the server is still part of the group; and sending results of processing the non-idempotent client requests to the another replicated server. It is inherent that when clones are employed for fault tolerance and improving throughput by workload balancing as in the system of

Ben-Shachar, a determination is made of another replicated server that may service the request as long as that server is registered, as stated in claims 11, 19, and 27.

Response to Argument

15. The examiner summarizes the various points raised by the appellant and addresses replies individually.

16. As per appellants' arguments filed March 18, 2004, the appellant(s) argue in substance:

(A) that the references do not teach or suggest "directly connecting" (see pages 6-8 of the brief),

(B) that the references lack the limitation of sending ping messages from the client to the server (see pages 8-9 of the brief),

(C) that the function of the dynamic ping interval employed is described in a different manner in the references (see page 16-20 of the brief).

(D) that the references do not teach of first determining that another replicated server is available.

(E) that the references lack obviousness to one of ordinary skill in the art regarding non-idempotent requests.

17. **In reply** to the arguments of (A): The fundamental argument is regarding the term "directly connecting" and whether the reference(s) teaches the functionality of directly connecting.

Before responding further, the examiner would like to emphasize and that the directly connecting is clearly taught by Ben-Shachar et al. (US 6,209,018 B1) herein referred to as Ben-Shachar, and not taught by White et al. (US 5933490 A) herein referred to as White. The primary reason White was employed, was to teach the limitation of "connecting by said client", wherein the client performs the initiating.

The examiner referred to the applicant's Disclosure to locate a definition for "directly connecting" which was the only amendment (paper no.7) to the claim language since start of prosecution. In doing so, nowhere in the disclosure states a clear and concise definition that "directly connecting" is defined as "without using intermediaries", as stated in the Summary of the Invention (page 4, first paragraph: Appeal Brief). Contrary to the argument, the applicant(s) state: "To facilitate the routing between a client and a server, the Client Library uses a request broker coupled to or located within the Client Library" (see page 16, lines 4-6: Disclosure) and "both the client and the server have respective request brokers. In particular, a client request broker 1000 (FIG. 10) is called by methods (object-oriented)... to forward requests... to a server (also taught by Ben-Shachar: col.2, lines 11-12). The client request broker is coupled to the server via a server request broker 1004" (see page 18, lines 8-13: Disclosure). **Note**: emphasis added.

During prosecution, the pending claims must be "given the broadest reasonable interpretation consistent with the specification." (MPEP 2111). As such, since the specification states request brokers at the server and at the client, one of ordinary skill in the art would conclude that the IIOP taught by Ben-Shachar (see Fig.1, #52 and col.2, lines 50-63) that is provided by CORBA (Common Object Request Broker Architecture) does not constitute an intermediary and therefore teaches of a client and a server "directly connecting" consistent with the specification. Furthermore, in regards to Fig.3 of Ben-Shachar, it is clearly shown that the client connects directly to the server (see Fig.3: line from client to server, "executeRequest"). Additionally, Ben-Shachar teaches that the service locator 84 (see Fig.3, #84), which the applicant claims as being an "intermediary", is a CORBA object (see col.7, lines 24-28 and 31-33), which again does not constitute an intermediary and therefore teaches of a client and a server "directly connecting" consistent with the specification.

In reply to the arguments of (B): The examiner concurs that references provide does not teach that the ping messages are sent from the client to the server (see objection above in reference to claim 7).

In reply to the arguments of (C): Ben-Shachar does not teach that the ping messages are sent from the client to the server (see reply (B) above), therefore, the examiner concur that the dynamic ping interval employed is described in a different manner in the reference (see objection above in reference to claim 8).

In reply to the arguments of (D): Ben-Shachar clearly teaches the limitation of claim 10, wherein determining that another replicated server is available (see rejection above).

In reply to the arguments of (E): The examiner concurs that references provide does not explicitly teach the limitations of claim 11 (see objection above in reference to claim 11)

18. For the above reasons, it is believed that the rejections should be sustained.

Young N Won

May 17, 2004

Conferee

JACK B. HARVEY
SUPERVISORY PATENT EXAMINER

Primary Examiner

HOSAIN ALAM
SUPERVISORY PATENT EXAMINER